

particular leiomyomas of the uterus, endometrial polyps, endometriosis, fibroadenomas, in particular fibroadenomas of the mamma, phyllodes tumours, in particular of the mamma, hamartomas, in particular of the mamma, prostate adenomas, lipomas, angiomyxomas, enchondromas, pleomorphic adenomas, especially of the salivary glands of the head, colon polyps, especially colon adenomas, atheromas and carcinomas that develop therefrom.

50. Use as claimed in claim 48, characterized in that the preparation is directed against the virus.

51. Use as claimed in one of the claims 48, 49, or 50, characterized in that the preparation is effective against a virus the nucleic acid of which contains at least one binding site for a gene product of genes of the HMGI(Y) family or derivatives thereof.

52. Use as claimed in one of the claims 48, 49, or 50, characterized in that the preparation is effective against a virus the nucleic acid of which codes for a gene product and this gene product interacts with at least one gene product of genes of the HMGI(Y) family or derivatives thereof.

53. Use as claimed in claim 4, characterized in that the binding site on the nucleic acid of the virus has the characteristic structural and sequence features of a first AT-rich sequence.

54. Use as claimed in claim 53, characterized in that the binding site on the nucleic acid of the virus, in addition to the first sequence, also has the following characteristic structural and sequence features:

a second AT-rich sequence is present and

the first and second sequence are arranged at a spatial distance from one another.

55. Use as claimed in claim 54, characterized in that the spatial distance is selected such that the first sequence and the second sequence are arranged relative to one another in one plane on the nucleic acid.

56. Use as claimed in one of the claims 48, 49, 50, 51, 52, 53, 54 or 55, characterized in that the genes of the HMGI(Y) family comprise MAG genes, HMGIC, HMGIY, aberrant transcripts of genes of the HMGI(Y) family and derivatives thereof.

57. Use as claimed in one of the claims 48, 49, 50, 51, 52, 53, 54, 55 or 56, characterized in that the virus infecting the at least one cell of the tissue constituting the tissue change is one as claimed in one of the previous claims.

58. Use as claimed in one of the claims 48, 49, 50, 51, 52, 53, 54, 56 or 57, characterized in that the preparation is effective against a virus from the group of DNA viruses and in particular adenoviruses and/or herpes viruses.

59. Use as claimed in one the claims 48, 49, 50, 51, 52, 53, 54, 56, 57 or 58, characterized in that the tissue of mesenchymal origin is at least partially infected with a virus from the group of DNA viruses and in particular adenoviruses and/or herpes viruses.

60. Use as claimed in one of the claims 48, 49, 50, 51, 52, 53, 54, 56, 57, 58 or 59, characterized in that the tissue change comprises a proliferation of at least one mesenchymal cell which is infected with a virus as claimed in one of the previous claims.

61. Use as claimed in claim 60, characterized in that the proliferation is a clonal proliferation.

62. Use as claimed in one of the claims 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60 or 61, characterized in that the tissue change comprises an epithelial component.

63. Use as claimed in claim 60, characterized in that the epithelial component has at least one cell which is infected with a virus as claimed in one of the previous claims.

64. Use as claimed in one of the claims 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62 or 63, characterized in that the cell infected with the virus has a chromosomal change.

65. Use as claimed in claim 64, characterized in that the chromosomal change affects at least one HMGI(Y) gene of the infected cell.

66. Use as claimed in claim 65, characterized in that the HMGI(Y) gene is selected from the group comprising MAG genes, HMGIC, HMGIY, aberrant transcripts of genes of the HMGI(Y) family and derivatives thereof.

67. Use as claimed in one of the claims 48 and 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65 or 66, characterized in that the tissue change is selected from the group comprising leiomyomas, in particular leiomyomas of the uterus, endometrial polyps, endometriosis, fibroadenomas, in particular fibroadenomas of the mamma, phyllodes tumours, in particular of the mamma, hamartomas, in particular of the mamma and the lung, prostate adenomas lipomas, aggressive angiomyxomas, enchondromas, pleomorphic adenomas, especially of the salivary glands of the head, colon polyps, especially colon adenomas, atheromas and carcinomas that develop therefrom.

68. Use as claimed in claim 67, characterized in that the carcinomas that have formed are selected from the group comprising colon carcinomas and prostate carcinomas.

69. Use as claimed in one of the claims 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67 or 68, characterized in that the agent is selected from the group comprising vaccines, antibodies, preparations that inhibit the

replication, transcription or translation of viral genes in particular of genes of adenovirus and/or herpes viruses; preparations that recognize and/or destroy cells infected by viruses especially adenoviruses and/or herpes viruses and preparations which achieve an antiviral effect by their effector-cell-stimulating action.

70. Use as claimed in claim 69, characterized in that the vaccine contains an antibody which is directed against the virus as claimed in one of the previous claims or a part thereof.

71. Use as claimed in claim 69, characterized in that the vaccine contains a particle of the virus as claimed in one of the previous claims or a part thereof.

72. Use as claimed in claim 70, characterized in that the antibody is selected from the group comprising monoclonal antibodies, polyclonal antibodies, polyvalent antibodies, antibody fragments and derivatives thereof.

73. Use as claimed in one of the claims 69, 70, 71 or 72, characterized in that the medicament for immunization is suitable for immunizing against viruses that are associated with the pathogenesis and/or aetiology of tissue changes as claimed in one of the previous claims.

74. Use of a method to determine an antiviral agent to produce a preparation for preventing and/or treating tissue changes as claimed in one of the previous claims and/or determining viruses against which the preparation as claimed

in one of the previous claims is directed, which comprises the steps:

a) transfecting a cell culture having a normal karyotype which is derived from a tissue that contains the tissue change as claimed in one of the previous claims, with an expression vector for a gene of the HMGI(Y) family or a derivative thereof,

b) comparing the RNA pattern of the transfected cells with that of control cultures, and

c) examining RNA(s) that are expressed or expressed more strongly in the transfected cultures compared to the control cultures for the presence of viral elements by sequence homology.

75. Use of a method comprising carrying out a PCR test in which the primer (pairs) used for the PCR conform to the sequence of viral nucleic acids in order to determine viruses,

which are suitable for producing a medicament as claimed in one of the previous claims and/or

against which the preparation as claimed in one of the previous claims is directed.

76. Use of a method comprising:

a) setting up a cDNA library of a tissue which contains the tissue change as claimed in one of the previous claims in which a gene of the HMGI(Y) family or a derivative thereof is activated or can be activated and

b) screening the cDNA library with a virus-specific probe or

- c) analyzing the cDNA clones for viral sequences or
- d) comparing with a cDNA library from a normal reference tissue to determine viruses that are suitable for producing a medicament as claimed in one of the previous claims and/or against which the preparation as claimed in one of the previous claims is directed.

77. Use of a method as claimed in one of the claims 74, 75 or 76, characterized in that the gene of the HMGI(Y) family is selected from the group comprising HMGIC, HMGIY, MAG, aberrant transcripts of genes of the HMGI(Y) family and derivatives thereof.

78. Use of a method as claimed in one of the claims 74, 75 or 76, characterized in that the virus, the viral element or the virus-specific probe is selected from the group of viruses which comprises the viruses as claimed in one of the previous claims.

79. Use of a method as claimed in one of the claims 74, 75, 76, 77, or 78 to determine viruses against which it is possible to immunize in order to prevent and/or treat tissue changes as claimed in one of the previous claims.

80. Use of a device for determining a virus involved in the pathogenesis of tissue changes as claimed in one of the previous claims which comprises a gene product of genes of the HMGI(Y) family or a part thereof or derivatives thereof bound to a carrier.

81. Use of a device as claimed in claim 80, characterized in that the viral nucleic acid in addition to the first sequence, also has the following characteristic structural and sequence features:

a second AT-rich sequence is present and

the first sequence and second sequence are arranged at a spatial distance from one another.

82. Use of a device as claimed in claim 81, characterized in that the spatial distance is selected such that the first sequence and the second sequence are arranged relative to one another in one plane on the nucleic acid.

83. Use of a diagnostic method, characterized in that a body fluid from a patient that may have such a tissue change is examined for the presence of antibodies against viruses as described in one of the previous claims, preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses, to diagnose a tissue change in which the tissue change comprises a tissue change as claimed in one of the previous claims.

84. Use of a diagnostic method, characterized in that a body fluid from a patient that may have such a tissue change is examined for the presence of antigens of viruses as described in one of the previous claims, preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses, to diagnose a tissue change in which the tissue change comprises a tissue change as claimed in one of

the previous claims.

85. Use of a diagnostic method, characterized in that a tissue sample is reacted with a preparation which is selected from the group comprising antibodies which react with viruses as described in one of the previous claims preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses or parts thereof, antigens that are derived from viruses as described in one of the previous claims, preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses, to diagnose a tissue change, characterized in that:

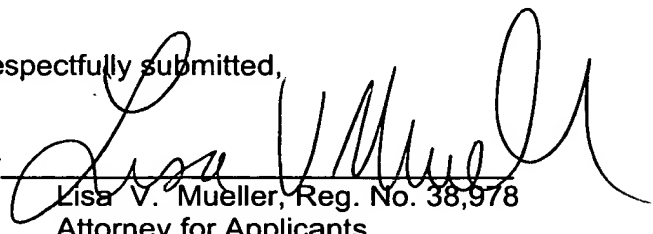
- a) the tissue change comprises one as claimed in one of the previous claims, and
- b) if viruses as described in one of the previous claims and preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses are present, a complex is formed from the preparation and the virus and
- c) the complex is detected.

REMARKS

If any fees are incurred as a result of the filing of this paper, authorization is given to charge Deposit Account Number 04-1644.

Respectfully submitted,

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